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PROPOSAL NO. AX6-8027

for

SUPER WIDE PRINT

STRAIGHTENER

STAT

16 February 1966

TABLE OF CONTENTS

I. INTRODUCTION

STAT [redacted] STAT takes pleasure in presenting this proposal to supply a Super Wide Print Straightener, as physically and functionally described in the Technical Discussion to follow. STAT [redacted] is fully staffed and equipped to design, fabricate, and assemble a piece of equipment that will completely meet the requirements set forth in the Development Objective, dated 8 November 1965. The Technical Discussion includes a pictorial concept of the proposed Print Straightener, and a Performance Schedule, Table No. 1, indicating the anticipated time requirements to complete and deliver the equipment. Following the Technical Discussion we present resumes of STAT [redacted] personnel qualified by training and experience to conduct such a program to successful completion. Finally, a very brief history of the STAT [redacted] may be of interest.

II. TECHNICAL DISCUSSION

2.1 General.

The Super Wide Print Straightener, hereinafter referred to as Straightener, will be designed and manufactured in accordance with the Customer's "Development Objectives", dated 8 November 1965.

2.2 Configuration and Dimensions.

The configuration of the Straightener will be basically as illustrated in Figure 1. The nominal over-all dimensions, in operating position, are 34 in. wide, 84 to 96 in. long, and 45 in. high. With feed table and receiving tray folded down, as for storage or transportation, the length will be approximately 40 in. The estimated dry weight of the Straightener will be approximately 150 pounds. All manual and electrical controls will be designed in accordance with the best human engineering practices and will be marked as to functions.

2.3 Detailed Description.

The Straightener will consist of four major assemblies:

a. Base Unit and Mounting Stand

b. Belt and Roller Unit

c. Control Unit

d. Print Feed Table and Receiving Tray

2.3.1 The Base Unit will be a fabricated aluminum structure containing a water tank, aluminum screen and rollers, and a drive motor. The Base Unit also supports the components listed as b., c., and d. above. The water tank will be of stainless steel with a working capacity of approximately 3-1/2 gallons, and will be provided with a liquid level indicator, a quick-fill opening, and a drain valve. The aluminum screen will be an endless belt of especially woven mesh, for high flexibility, and will be timing belt-driven by a fractional horsepower DC motor, e.g., a motor manufactured by the STAT [redacted] The variable speed control, a component of the Control Unit, will supply direct current for the motor from the 115 volt alternating current source. The Mounting Stand will be a steel fabrication, equipped with swivel (lockable) casters for easy mobility. The Mounting Stand will also provide attachment for the Print Feed Table and the Receiving Tray supporting arms. Storage shelves for water bottles and other supplies will be provided.

2.3.2 The Belt and Roller Unit will consist of an aluminum frame, canvas belt, print straightening rollers and idler rollers. The canvas belt will be driven by a timing belt in synchronism with the aluminum screen. Proper tension will be maintained by a spring loaded idler roller. The entire Belt and Roller Unit will be pivoted on the driving roller, allowing the canvas belt to be lifted away from the screen for servicing.

2.3.3 The Control Unit will consist of:

a. Immersion type heating element, 1000 watts, stainless steel sheathed.

b. Thermostat for temperature control.

c. Motor variable speed control, interlocked with Belt and Roller Unit.

d. Power switch, float and low water level sensing switch, and low water level indicating light.

The power requirements will be 115 volt, 60 cycle, single phase AC, with a maximum current load of 15 amperes. The drive motor interlock will be such that the motor is electrically disabled when the Belt and Roller Unit is not in the operating position. The electric cable to be supplied will be equipped with a grounding plug. The low water level sensing switch will be actuated by the float to turn off the water heating element when the liquid level reaches a predetermined minimum depth, at which time the indicator light will glow to call attention to the condition. The electrical circuit will be adequately fused.

2.3.4 The Print Feed Table and the Receiving Tray will be fabricated of stainless steel. Both units will be approximately 32 in. wide; the Feed Table will be approximately 20 in. long, and the Receiving Tray approximately 40 in. long. Both Table and Tray will be pivoted to opposite ends of the Base Unit and, as illustrated in Figure 1, locking hinged legs will support them during Straightener operation, and also permit lowering them into the Mounting Stand for compact storage and unit transport.

2.4 Capacity.

The proposed Straightener will handle prints of any weight and type of emulsion. The design will permit handling prints of any size up to 30 in. wide and 40 in. long, as limited by the length of the Receiving Tray. The 3-1/2 gallon water tank capacity will permit continuous operation for a minimum of 8 hours.

2.5 Operation.

The basic operation of the Straightener will be to pass a curled print over the water vapor generated by heating the water in the tank by means of the immersion type heating element, and then passing the moistened print between flattening rollers. The time required to straighten a print will depend on its size, but in general will be less than 10 seconds. Feeding will be accomplished by engaging the print, emulsion side up, between the moving canvas belt and the moving aluminum screen. The straightened print will disengage from the flattening rollers at the rear end of the unit and drop into the receiving tray. Water temperature sufficient to generate vapor will be maintained by the thermostatic control of current to the heating element. Continuous operating periods longer then 8 hours will be feasible if make-up water is added to the tank in small quantities. An initial warm-up period of approximately 15 to 30 minutes will be required before operation can begin. The warm-up period is minimized by tank partitioning.

PERFORMANCE SCHEDULE

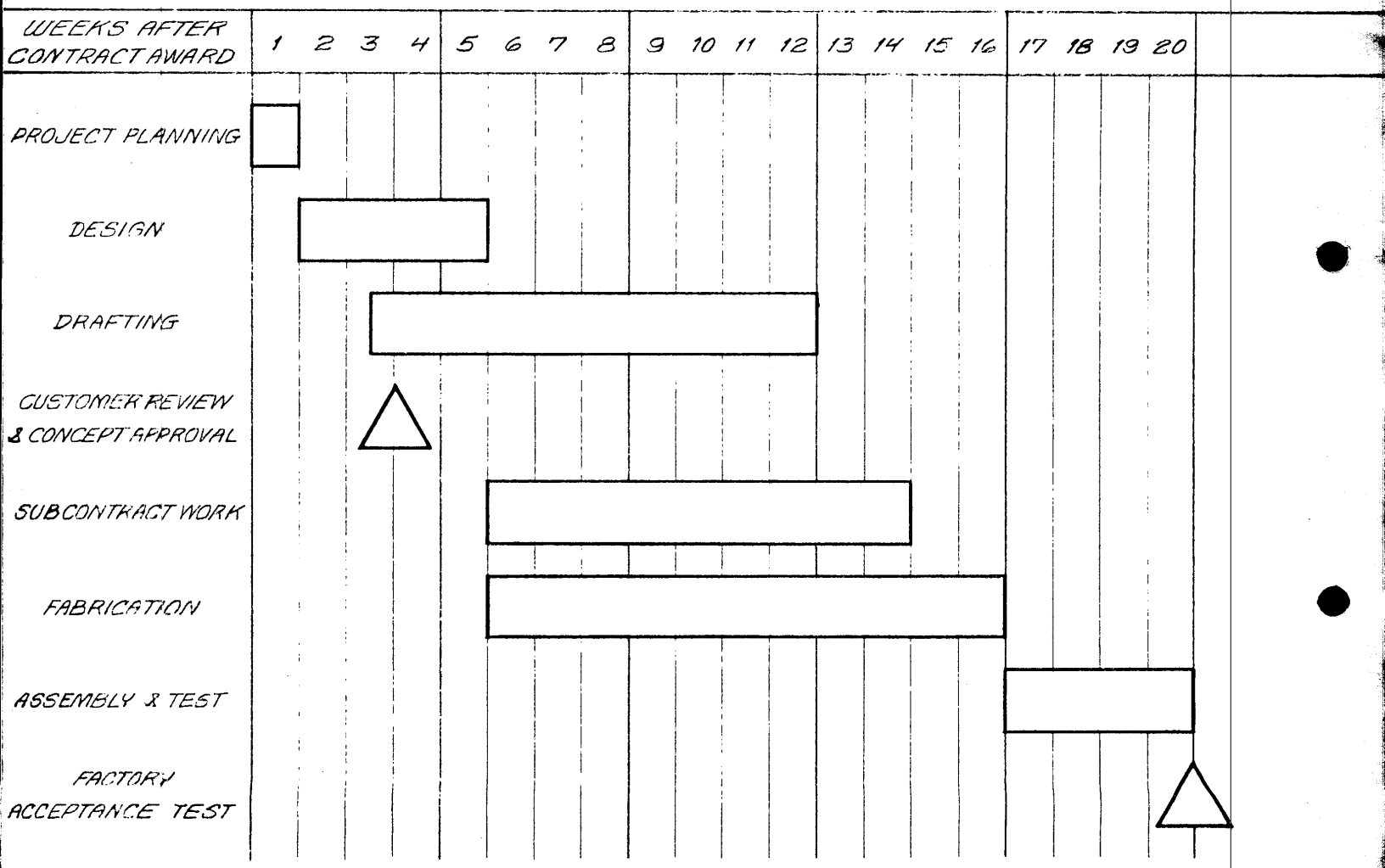
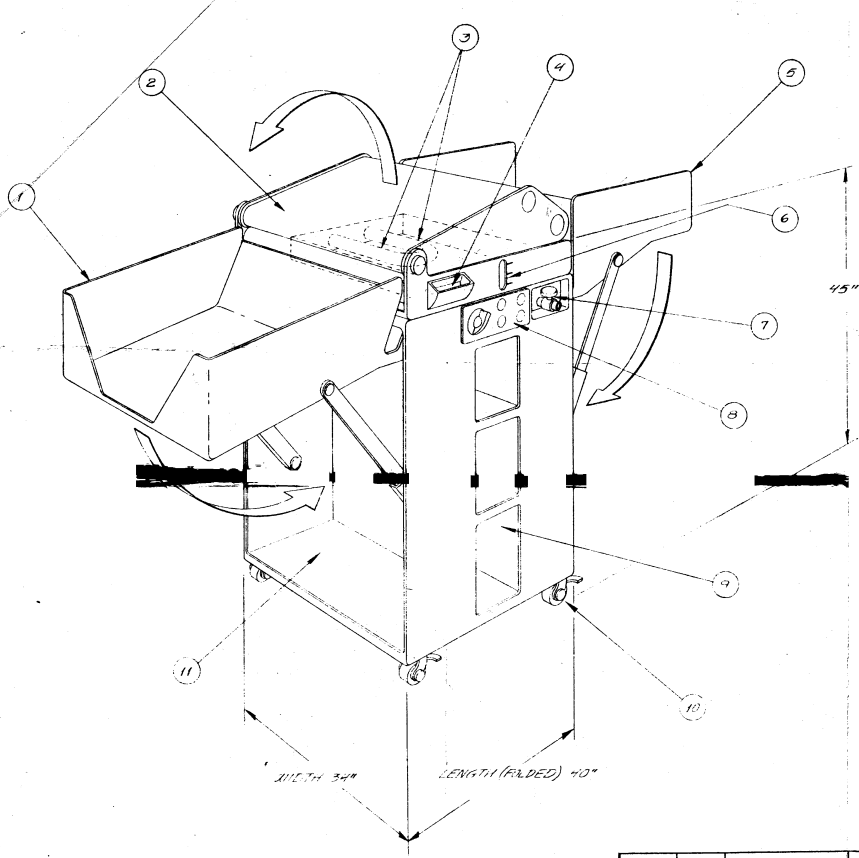


TABLE No. 1

Next 14 Page(s) In Document Denied

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



1. PRINT RECEIVING TRAY
2. CARRIER BELT & ROLLER ASSEMBLY
3. HEATING UNIT
4. WATER FILL [illegible]
5. FEED TRAY
6. PAPER LEVEL GAUGE
7. WATER DRAIN
8. CONTROL UNIT
9. STORAGE SHELFS
10. CASTERS
11. [illegible]

NOTE: ALL DIMENSIONS REFLECTED ARE APPROXIMATE

ITEM NO.	QTY REQD	PART OR IDENTIFYING NO.	MATERIAL SIZE DESCRIPTION & SPECIFICATION
			LIST OF MATERIALS OR PARTS LIST

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES
TOLERANCES ON DIMENSIONS

DECIMAL	ANGULAR
2 PLACE ± .02	± 1°
3 PLACE ± .010	
4 PLACE ± .0005	

DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON

APPLICATION

USG/A3-710-4111

SUPER WIDE PRINT STRAIGHTENER

SIZE	CODE IDENT NO.	DWG NO.
C	36090	FIGURE 1

SCALE | SHEET

LIBRA NO.

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